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Application No.: 10/523,368
Art Unit: 3656

Response under 37 CFR §1.116
Attorney Docket No.: 052102

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended) A ball screw comprising:

a screw shaft having a ball rolling groove on an outer periphery thereof;

a plurality of balls rollable along said ball rolling groove;

a nut member engaged with said screw shaft through said balls;

a lubricant supply mechanism provided at each axial end of said nut member; and

a seal member provided outside said lubricant supply mechanism;

wherein said lubricant supply mechanism has an application member whose distal end is in sliding contact with said ball rolling groove, said application member being impregnable with lubricant, so that the lubricant is supplied to said ball rolling groove through said application member, and

wherein an oil lip member is provided in a vicinity of said application member with a predetermined gap provided between itself and said application member in a direction opposite to the rotation direction of the screw shaft of said ball rolling groove, said oil lip member having a distal end placed in sliding contact with a surface of said ball rolling groove to scrape the lubricant off said ball rolling groove, and said oil lip member being made of a material that is not impregnable with the lubricant.

Claim 2 (Original) A ball screw according to claim 1, wherein said oil lip member is secured to a mount portion of the application member of said lubricant supply mechanism through a leaf spring so that the distal end of said oil lip member is always kept in sliding contact with the surface of said ball rolling groove by elastic force of said leaf spring.

Claim 3 (Previously Presented) A ball screw according to claim 1, wherein said oil lip member has a sliding contact portion that comes in sliding contact with the surface of said ball rolling groove, said sliding contact portion being made of a resin material, and said sliding contact portion being integrally provided at a distal end of an oil lip body made of an elastic material,

said oil lip member being secured to a mount portion of the application member of said lubricant supply mechanism through a support member so that a distal end of said sliding contact portion is always in sliding contact with the surface of said ball rolling groove.

Claim 4 (Previously Presented) A ball screw comprising:

- a screw shaft having a ball rolling groove on an outer periphery thereof;
- a plurality of balls rollable along said ball rolling groove;
- a nut member engaged with said screw shaft through said balls;
- a lubricant supply mechanism that supplies lubricant to a part of the ball rolling groove located in said nut member; and
- a seal member provided at each end of said nut member;

wherein said seal member has an oil lip member whose distal end is always in sliding contact with a surface of said ball rolling groove to scrape the lubricant off said ball rolling groove, said oil lip member being provided at a predetermined angle α with respect to a radial direction of said screw shaft and at a predetermined lead angle θ with respect to a groove direction of said ball rolling groove.

Claim 5 (Previously Presented) A ball screw according to claim 4, wherein said oil lip member has a sliding contact portion that comes in sliding contact with the surface of said ball rolling groove, said sliding contact portion being made of a resin material, and said sliding contact portion being integrally provided at a distal end of an oil lip body made of an elastic material.